|                   |              |  |                            |         |            |              |          |          |                     | 10/047,731 |          |          |          |              |               |               |            |               |               | KOSHIDA ET AL |          |           |           |               |          |            |     |  |
|-------------------|--------------|--|----------------------------|---------|------------|--------------|----------|----------|---------------------|------------|----------|----------|----------|--------------|---------------|---------------|------------|---------------|---------------|---------------|----------|-----------|-----------|---------------|----------|------------|-----|--|
|                   |              |  |                            |         |            |              |          |          | Examiner Tae H Yoon |            |          |          |          |              |               |               |            |               | Art Unit      |               |          |           |           |               |          |            |     |  |
|                   |              |  |                            |         |            |              |          |          |                     |            |          |          |          |              |               |               |            | .             | 1714          |               |          |           |           |               |          |            |     |  |
|                   |              |  |                            |         |            |              |          |          |                     |            |          |          |          |              |               |               |            |               | ,             |               |          |           |           |               |          |            |     |  |
|                   | 4            | Rejected   | _ (Through numer Cancelled |         |            |              | eral     | }        |                     | N          | 1        | Non-E    | ec       | ected        |               | A             | Appeal     |               |               |               |          |           |           |               |          |            |     |  |
|                   |              | Allowed  | l                          | •       | Restricted |              |          |          |                     | •          |          |          | Ī        | interférence |               |               |            | 0             | Objected      |               |          |           |           |               |          |            |     |  |
|                   |              |  | <u> </u>                   |         | 7:-::1     |              |          |          |                     |            | ]<br>    | <u>_</u> | <u> </u> |              |               |               | alm        |               | Date .        |               |          |           |           |               | _        |            |     |  |
| Claim             | 2            | Date -   |                            | TT      |            | Claim        |          |          | Ŧ                   | Τ'         | Det      | r        | Т        |              |               |               |            |               | 1111 <u>1</u> |               |          | 7         | ПП        |               |          |            |     |  |
| Final<br>Original | とな           |  |                            |         |            | Find         | Original |          |                     |            |          |          |          |              |               | Final         | Ofgrad     |               |               |               |          |           |           |               |          |            |     |  |
| (F)               | Ь            |  | 1                          | 士       |            |              | 51       | $\Box$   | 土                   |            | 匚        | 上        | t        | 上            |               |               | 101        |               |               | _             | ⇉        | $\exists$ |           |               |          | 口          |     |  |
| <b>1</b> 8        | Ţ            |  | 7                          | 1       | 7          |              | 52       | $\Box$   | +                   | 1          |          | -        | ╀        |              |               | _             | 102        | 1             | Н             | +             | -        | -         | $\dashv$  |               | Н        | Н          |     |  |
| 3                 | H            | <del>▎</del> ╂╂╂                                 | +                          | +       | -[]        |              | 53<br>54 | H        | +                   | +          | $\vdash$ | L        | t        | $\pm \pm$    |               |               | 104        |               |               | ╛             |          |           |           |               |          |            |     |  |
| 5                 |              |  | 1                          | 工       | ]          |              | 55       | 口        | 1                   | Ţ.         | F        | Ľ        | Į        | П            |               |               | 105        | Г             | П             | 4             | 4        |           |           |               | Ц        | Ц          |     |  |
| 6 7               | H            | <del>┠╺╂</del> ╾╂╌╂╌╂╌╂╌                         | +                          | +       | -          | $\vdash$     | 56<br>57 | Н        | +                   | +-         | $\vdash$ | Ͱ        | ╀        | ++           |               | <del> -</del> | 106<br>107 | $\vdash$      | H             | ┪             | -1       |           | $\exists$ | Н             | Н        | Н          |     |  |
| 8                 | H            |  | 1                          | 士       |            |              | 58       | 口        | 士                   | 工          | 匚        |          | I        |              |               |               | 108        |               |               | _]            |          |           |           |               |          | 口          |     |  |
| 9                 | H            |  | Ţ                          | Ŧ       |            |              | 59<br>60 | Н        | 4                   | +          | 1        | -        | F        | +-           |               | -             | 109        |               | Н             | 4             | 4        | $\dashv$  | Н         | $\vdash$      | Н        | Н          |     |  |
| 10                | Н            | <del>├┤┤┤┤</del>                                 | +                          | +       | -          |              | 61       | H        | +                   | ╁          | ┢        | 十        | ╁        | ++           |               |               | 111        |               |               | 1             | 1        |           |           | L             |          |            |     |  |
| (72)              | $\mathbf{D}$ |  | 7                          | #       | ]          |              | 62       | П        | 7                   | T          | F        | F        | T        | $\Box$       |               |               | 112        |               | П             | $\dashv$      | П        |           |           | П             | П        | Ξ          |     |  |
| 13                | N-           | <del>┞┤</del> ┼┼┼┼┼                              | +                          | +       | -          |              | 63<br>64 | H        | +                   | +          | ╁        | ╁        | ╁        | ╂┼           |               | $\vdash$      | 113        |               | Н             | ┪             | ᅥ        | $\vdash$  | -         | $\vdash$      | Н        | Н          |     |  |
| 16                |              |  | ⇉                          | 士       | ቷ።         |              | 65       |          | 1                   | 丰          | 口        | L        | t        | 廿            | ļ             |               | 115        |               |               | 7             |          |           |           |               |          |            |     |  |
| 16                | L.           |  | 4                          | +       | 4          |              | 66<br>67 | $\vdash$ | +                   | +          | ┡        | ╀        | ╀        | ╀┼           |               | <del> </del>  | 115        |               | Н             | ┥             | -        | Н         | $\vdash$  | ┝             | Н        | Н          |     |  |
| 17                | $\vdash$     | <del>┠╸╏┊</del> ╏╌╏╌╂╼╂╾                         | +                          | +       | 1          |              | 68       | H        | _                   | 士          | T        | $\vdash$ | T        | 止            | 1             |               | 118        | Γ             | 日             | Ⅎ             |          |           |           |               |          | Ħ          | ;   |  |
| 19                |              |  | 1                          | $\Box$  |            |              | 69       | П        | $\Box$              | I          |          | L        | L        | $\Pi$        |               | 匚             | 119        |               | Ц             | $\dashv$      |          |           |           |               |          | Ц          |     |  |
| 20                | $\vdash$     | <del>┞┋┋</del>                                   | +                          | +       | -          | $\vdash$     | 70 77    | Н        | +                   | ╫          | $\vdash$ | ╀        | +        | ++           | Œ             | $\vdash$      | 120        |               | Н             | $\dashv$      | $\dashv$ | Н         | Н         | -             | Н        | Н          |     |  |
| 22                | ┢            |  | 1                          | Ť       |            |              | 72       |          | 士                   | 士          | T        | T        | t        | 11           |               |               | 122        | Г             |               | $\Box$        |          |           |           |               |          |            |     |  |
| 23                |              |  | 4                          | Ţ       | ]          |              | 13       | П        | 1                   | 1          | L        | F        | Ļ        | $\mathbf{H}$ |               |               | 123        |               | Н             | 4             |          | Н         |           | L             |          | Н          |     |  |
| 24<br>25          | -            |  | +                          | +       | -          |              | 74<br>75 | Н        | +                   | ╅          | ۲        | ۲        | ╁        | ++           | ı             | -             | 125        |               | Н             | 7             | _        |           |           |               |          |            |     |  |
| 26                |              |  | 1                          | $\perp$ | 1          | П            | 76       | 口        | 丰                   | 1          | I        | T        | 1        | $\Box$       |               |               | 126        |               | П             | $\Box$        | П        |           |           |               |          |            |     |  |
| 27                | H            | ++++   | 4                          | +       | - ;;;      | -            | 77<br>78 | ╀┤       | -                   | +-         | ╂╌       | +        | ╀        | ╁╂╴          | H             | <del> </del>  | 127        |               | Н             | $\dashv$      | -        | Н         | Н         | <del> -</del> | -        | Н          |     |  |
| 29                | Н            | <del>                                     </del> | +                          | _       | 1          |              | 79       |          | 士                   | 士          | L        | Ė        | 1        | 廿            |               |               | 129        | L             | d             | ⇉             |          | Ħ         |           |               |          |            |     |  |
| 30                |              |  | 1                          | 7       | 7          |              | 80       | П        | T                   | T          | F        | F        | Ŧ        | T            |               |               | 130        |               | П             | $\Box$        |          | П         |           | F             | <u> </u> | H          | :   |  |
| 31                | $\vdash$     | <del>╏╸╏╶╏</del> ╶╏                              | +                          | ┿       | -          | H            | 81<br>82 | $\vdash$ | ┰                   | +          | ╂        | ╁        | +        | ++           | l i           | -             | 131        |               | Н             | $\dashv$      | ᅥ        | Н         | $\vdash$  | ⊢             | -        | H          |     |  |
| 33                |              |  | 1                          | 士       |            |              | 83       | 口        | 士                   | 土          | 上        | L        | 1        | 止            |               |               | 133        | $\Box$        | 口             |               |          |           |           |               |          | 口          |     |  |
| 34                |              |  | 4                          | Ŧ       | 4          |              | 84       | П        | $\bot$              | 1          | 1        | -        | 1        | 4-4          |               | <u> </u>      | 134<br>135 |               | Н             | -             | _        | Н         |           | Ͱ             | -        | Н          |     |  |
| 35                | -            | <del>┞╌╏╸╏</del> ╶╏                              | +                          | +       | -          |              | 85<br>86 | Н        | +                   | +          | ╀        | ╀        | +        | ++           |               |               | 136        | Т             | Н             |               | _        | Н         | Н         |               |          | Н          |     |  |
| 37                |              |  | 1                          | 1       | 1          |              | 87       |          | 二                   | 工          | I        | I        | T        | 工            | ]             |               | 137        | ${\mathbb T}$ |               |               |          |           |           |               |          | П          |     |  |
| 38                | Г            |  | 7                          | $\perp$ | -          |              | 88       | $\Box$   | $\perp$             | +          | 1        | +        | +        | ++           | 1             | _             | 138        |               | Н             | $\dashv$      | -        | Н         | $\vdash$  | ┞             | -        | $\vdash$   |     |  |
| 39<br>40          | 1            | <del>╿╸╿╶╿</del> ╶╿                              | +                          | +       | 1          | <b>—</b>     | 80       |          | _                   | +          | t        | t        | t        | 十十           |               |               | 140        |               | Н             |               |          | $\Box$    |           |               |          |            |     |  |
| 41                |              |  | ⇉                          | 工       | 1          |              | 91       | П        | 耳                   | 1          | L        | T        | Ţ        | $\bot$       | 1             |               | 141        |               |               |               | _        |           | F         | Г             | Γ        |            |     |  |
| 42                | H            | <del>┞┋</del> ┼┼┼┼┼                              | 4                          | +       | -          | <del> </del> | 92<br>93 | Н        | +                   | +-         | ╀        | ╁        | +        | ++           |               | -             | 142        |               | Н             | Н             |          | Н         | H         | ⊢             | ╁        | $\vdash$   |     |  |
| 43                | $\vdash$     | <del>▍</del> ▐                                   | 1                          | $\pm$   | <b>-</b>   |              | 3        |          | 1                   | 士          | 1        | 1        | 1        | 11           |               |               | 144        |               |               |               |          |           |           |               | 匚        |            | · . |  |
| 45                |              |  | $\Box$                     | $\top$  | 7          |              | .95      | П        | J                   | Ŧ          | F        | F        | Ţ        | $\Pi$        |               |               | 145        |               | П             |               |          |           | L         | L             | Ĺ        | <b> </b> _ |     |  |
| 46                | L            | ╂╂╂╂   | 4                          | +       | -          | <b> </b>     | 96<br>97 | Н        | +                   | ╀          | ╁╴       | +        | +        | ++-          | -[:           | -             | 146        |               | Н             | Н             | -        | Н         | $\vdash$  | ⊢             | +-       | Н          |     |  |
| 48                |              | <del>                                     </del> | ╛                          | 士       | _          |              | 98       | $\Box$   | 1                   | 土          | t        | İ        | 1        | 止            |               |               | 148        |               |               |               |          |           |           |               |          |            |     |  |
| 49                |              |  | 4                          | 1       | ]          |              | 99       | П        | $\perp$             | Ţ          | F        | Γ        | Ţ        | $\mathbf{H}$ | 1             |               | 149        |               | $\Box$        |               |          | H         | F         | 1             |          |            |     |  |
| 50                | _            | خللنا  | لـ                         |         | ⊞ ل        |              | 100      | ш        |                     |            |          |          |          |              | <b>J</b> :::: | 1             | 150        | _             | ш             | ш             | _        |           | <u> </u>  | _             | _        | ـــــــ    | 3   |  |

Application No.

Applicant(s)